



ABSTRACT

A method of driving a non-volatile flip-flop circuit comprising a first inverter (INV1) coupled to a first memory node (9) and a second memory node (10), a second inverter (INV2) coupled to the second memory node (10) and the first memory node (9), a first pass transistor (5), a second pass transistor (6), a first switching element for control (7) and a first variable resistor element (15) which are connected serially to each other and are connected between the first memory node (9) and a plate line (18), and a second switching element for control (8) and a second variable resistor element (16) which are connected serially to each other and are connected between the second memory node (10) and the plate line (18), wherein the resistance values of the first and second variable resistor elements (15, 16) can be changed by the heat generated by a current.